



# MEMORANDUM

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DATE: December 31, 2008  
For January 15, 2009 Hearing

*Albert Elias*

TO: Peter M. Gavin  
Zoning Examiner

FROM: Albert Elias, AICP  
Urban Planning & Design  
Director

SUBJECT: SPECIAL EXCEPTION LAND USE – URBAN PLANNING AND DESIGN  
REPORT  
SE-08-45 Cienega Substation – Colossal Cave Road, RH Zone (Ward 4)

**Issue** – This is a request by Tucson Electric Power Company (TEP) for approval of an electric substation as a special exception land use in the RH zone. The project site is 12.70 acres in size and located north of Dawn Drive, approximately 750 feet west of Colossal Cave Road (see Case Location Map). The preliminary development plan indicates that 2.58 acres are to be occupied by the 138 kilovolt (138kV) substation equipment and enclosed with a decorative masonry wall, ten feet in height.

Power substations with an input voltage of one-hundred and fifteen kilovolts (115kV) or greater are allowed as a Special Exception land use providing they meet the criteria established in Section 3.5.11.1. C., F., G. and J. and approval through the Zoning Examiner Full Notice Procedure, Section 23A-50 and 23A-53. A public hearing before the Zoning Examiner is required. The Zoning Examiner will render a decision to grant the use with or without conditions, or to deny the use.

**Department of Urban Planning and Design Recommendation** – The Department of Urban Planning and Design recommends approval of the requested special exception use, subject to the attached preliminary conditions.

## **Background Information**

Existing Land Use: Undeveloped

## Surrounding Zones and Land Uses:

North: Zoned RH, CMH-1; Undeveloped State Trust Land, Acacia Elementary School and a residential subdivision

South: Zoned RH; Undeveloped State Trust Land

East: Zoned CMH-1, GR-1, RH; residential and Undeveloped State Trust Land

West: Zoned RH; Undeveloped State Trust Land

Previous Cases on the Property:

SE-08-05 TEP Cienega Substation- Dawn Drive, RH Zone. This was a request for approval of a special exception land use for a 138 kilovolt (138kV) substation in the RH zone. The site is located on the north side of Dawn Drive, approximately 1000 feet west of Shalom Drive. On September 3, 2008, the case was withdrawn in order for TEP to pursue a new location under case SE-08-45.

Related Cases:

SE-98-32 Tucson Electric Power Company – Broadway Boulevard, R-1 Zone. This was a request for approval as a special exception land use for the reconstruction and expansion of an electric substation in the R-1 zone. The site is located south of the El Conquistador Estates Subdivision, within the north parking lot of El Con Mall, approximately 1,600 feet north of Broadway Boulevard. The applicant proposed an expansion from 2,726 to 5,670 square feet within an easement of 11,543 square-feet in size. On November 5, 1998, the Zoning Examiner approved the Special Exception request.

SE-00-82 Tucson Electric Power Company – Valencia Road, RX-1 Zone. This was a request for approval of an electric substation, approximately 101,910 square feet in size, as a special exception land use in the RX-1 zone. The site is located south of Valencia Road, 4,741 feet west of Houghton Road. On December 14, 2000, the Zoning Examiner approved the Special Exception request.

SE-06-36 TEP – Silverbell Road, RX-1 Zone. This was a request for approval of a special exception land use for an electrical substation, approximately 106,000 square feet in size, located in the RX-1 zone. The substation is located on 3.42 acres at the northeast corner of Silverbell Road and El Camino del Cerro. The Zoning Examiner approved the special exception on November 2, 2006.

**Applicant's Request** – The applicant requests approval of a proposed 138kV substation as a special exception land use on 12.70 acres in the RH zone.

**Planning Considerations**

The *Rincon Southeast Subregional Plan (RSSP)*, Houghton/Dawn Map Detail #8, and the City's *General Plan* provide land use policy guidance for the area in which the Tucson Electric Power substation is proposed. The *Design Guidelines Manual* suggests design techniques that can be used to implement land use plan policy objectives.

*General Plan* policy supports measures that protect life and property, including those that minimize potential loss due to flooding and erosion. Policies promote protecting washes and



associated habitat and wildlife corridors. Other policies encourage environmentally sensitive site design that enhances the visual quality of the community. The *Design Guidelines Manual* recommends techniques for improving the visual appeal of freestanding walls, and screening less visually attractive uses, such as utility equipment.

The Houghton/Dawn map detail of the *RSSP* covers an approximately 3,500-acre or 5.5-square-mile area of undeveloped Arizona State Trust lands, generally located north and south of Interstate 10 between Houghton Road on the west and Colossal Cave Road on the east. This map detail area lies immediately east of map detail #4-RSSP and the area depicted shares many of the same environmental characteristics.

The Environmental Resource Zone (ERZ) recognizes the value of Tucson's open space resources, particularly the critical and sensitive wildlife habitat of eastern Pima County associated with public preserves. The Houghton/Dawn area contains numerous significant washes that were added to the ERZ base map when original City zoning was established for this area. There is one ERZ watercourse and one proposed ERZ watercourse within the Arizona State Land Department (ASLD) parcel boundary.

Vehicular access to the project site is proposed from Colossal Cave Road via a 40-foot wide private access easement. The small portion of Colossal Cave Road located within the City is identified as a scenic arterial street with a future right-of-way of 150 feet on the *Major Streets and Routes Plan* map.

The Pima Association of Governments - Transportation Planning Division (PAG-TPD) did not provide estimates regarding the number of vehicle trips per day generated by the proposed development. Field inspection by staff indicates there are currently no billboards on the project site.

### **Design Considerations**

Land Use Compatibility – The lease area is located approximately 750 feet west of the intersection of Colossal Cave Road and Dawn Drive. The proposed TEP lease site, located along the southwestern boundary of the State parcel, is adjacent to an existing electrical transmission line. An unpaved road parallels the southern boundary of the project site. A transmission line easement, 330 feet in width and located on the southern portion of the ASLD parcel, crosses the site in an east-west direction.

The area is zoned RH (Rural Homestead, very low-density residential) and RX-1 (low-density residential). The closest residential development within the City is a recreational vehicle park located east of Houghton Road, just north of the Rocket Road alignment. The TEP substation lease boundary is approximately 3,000 feet from the existing residential properties to the northeast.

A decorative masonry wall, ten feet in height, is proposed to enclose the substation and ground equipment. The height of the substation equipment within the walled area is approximately 14 feet. The preliminary development plan indicates that a “utility service” does not require a landscape border. This is true only for minor utility installations used to service a site, not major elements of a distribution system such as this project. A landscape border in addition to the ten-foot high wall is required where contiguous to a residential zone. The existing natural landscape that occurs within the 200 setback serves to meet the landscape requirement. The applicant proposes to provide landscape screening in the form of additional trees and other vegetation in proximity to the substation site wall. All proposed vegetation will be planted in a manner so as to mimic as closely as possible the surrounding vegetation patterns and will be watered during a three-year establishment period.

Drainage/Grading/Vegetation – The terrain is generally flat and braided by a network of shallow washes. The characteristic vegetation is creosote, bur sage, and cacti species, with mesquite found in and along the washes. There is one ERZ watercourse and one proposed ERZ watercourse within the ASLD parcel boundary. Both regulated watercourses are reaches of Franco Wash. According to the Wash information maps, there is a small portion of the northeastern part of the project site within a Critical and Sensitive Biological Community (Shaw 1986). This area, which is classified as Class II Habitat, is associated with a reach of the Franco Wash.

Soils and topography on the site are characteristic of alluvial fans. Vegetated soils are resistant to erosion but will erode when disturbed or when vegetation is removed. The site lies in a non-designated basin and is not subject to detention requirements. Threshold retention is indicated and water harvesting is required by the *LUC*.

Approximately 3.80 acres of the total 12.70 acre site will be graded. The grading area will not encroach into the existing 100-year floodplain or erosion hazard setback areas. The Pima pineapple cactus (PPC) and needle-spined pineapple cactus occur within the project site boundaries. The submitted report indicates that there are eight PPC within the proposed substation boundary and 23 located outside the boundary, but within the proposed ASLD lease area and the area surveyed south of the proposed substation site for constructing an access road. One needle-spined pineapple cactus was observed outside of the substation site but within the area surveyed for construction of an access road. Additional mitigation is required per *LUC* Section 3.8.6.4.C.

Road Improvements/Vehicular Access/Circulation – An access easement is provided for this site from Colossal Cave Road. The easement branches off to two access driveways; one driveway provides access to the southeast corner of the substation and the other provides access to the southwest corner. An unpaved service road that leads to a watering hole to the north bisects the project site. The applicant has proposed to realign a portion of the road to the west of the proposed substation.



**Performance Criteria** - Power substations with an input voltage of one-hundred and fifteen kilovolts (115kV) or greater are allowed as a Special Exception land use providing they meet the criteria established in Section 3.5.11.1. C., F., G and J. and approval through the Zoning Examiner Full Notice Procedure, Section 23A-50 and 23A-53.

*3.5.11.1 Distribution System.*

*C. The setback of the facility, including walls or equipment, is two hundred (200) feet from any existing adjacent residential zone. The setback may be varied as provided in Sec. 5.3.3, Variance.*

The proposed substation site will be a 12.7 acre right-of-way (ROW) on a 308.15-acre ASLD parcel zoned RH. The substation, including walls and equipment, is setback at least 200 feet from all sides of the right-of-way area.

*F. Noise emission at the property line is to be equivalent to the residential requirements of the noise ordinance.*

Noise emissions for the proposed substation will not exceed the maximum residential sound level of 62 dB(A) beyond the project site boundary.

*G. No TVI (television interference) or RIV (radio interference) on a continuous basis is permitted.*

There will be no continuous TV or radio interference associated with the proposed substation.

*J. The use must include a ten(10) foot high wall in an earth tone and vegetative landscaping where contiguous to a residential zone.*

The substation equipment will be enclosed with an earth tone color, graffiti resistant masonry wall, ten feet in height. The applicant proposes low water use landscaping around the perimeter of the substation to mitigate the removal or disturbance of existing vegetation as well as to buffer and screen off-site properties.

**Conclusion** – The proposed substation use is consistent with *Rincon Southeast Subregional Plan* and in compliance with performance criteria of *LUC 3.5.11.1*. Screening and buffering proposed for the project is consistent with *General Plan* policies and will minimize visual impacts on the surroundings natural and built environment. Subject to compliance with the attached preliminary conditions, approval of the requested special exception land use in the RH zone is appropriate.

## Preliminary Conditions

PROCEDURAL

1. A development plan in substantial compliance with the preliminary development plan dated October 24, 2008, and the Environmental Resource Report dated October 24, 2008, is to be submitted and approved in accordance with Section 5.3.8. of the *Land Use Code*.
2. The property owner shall execute a waiver of potential claims under A.R.S. Sec. 12-1134 for this zoning amendment as permitted by A.R.S. Sec. 12-1134 (I) in the form approved by the City Attorney and titled “Agreement to Waive Any Claims Against the City for Special Exception Land Use”.
3. Historic or prehistoric features or artifacts discovered during future ground disturbing activities should be reported to the City of Tucson Archaeologist. Pursuant to A.R.S. 41-865 the discovery of human remains and associated objects found on private lands in Arizona must be reported to the Director of Arizona State Museum.
4. Any relocation, modification, etc., of existing utilities and/or public improvements necessitated by the proposed development shall be at no expense to the public.
5. “Safe by Design” concepts shall be incorporated in the development plan for review by the Tucson Police Department.
6. Five years are allowed from the date of initial authorization to implement and effectuate all Code requirements and conditions of the special exception land use.

LAND USE COMPATABILITY

7. A decorative masonry screen wall, ten feet in height, is to be provided around the perimeter of the substation and the masonry shall be a color that blends in with the natural surroundings.
8. Low-water use landscaping shall be planted around the perimeter of the substation to mitigate the removal or disturbance of existing vegetation, as well as to buffer and screen off-site properties. The proposed vegetation to be planted will mimic as closely as possible the surrounding vegetation patterns.
9. The height of the equipment shall be limited to 14 feet, except for lightning protection masts tapering from 8 to 4 inches in diameter above the 14-foot-height.
10. All walls visible from a public right-of-way and/or adjacent to existing residential development, are to be graffiti-resistant and incorporate one (1) or more visually appealing design treatments, such as the use of two (2) or more decorative materials like stucco, tile, stone, or brick; a visually interesting design on the wall surface; varied wall alignments, (jog, curve, notch, setback, etc.); and/or trees and shrubs in voids created by the wall variations.
11. Six (6) inch wide fence block or greater shall be used for perimeter walls.

## Preliminary Conditions

DRAINAGE/GRADING/VEGETATION

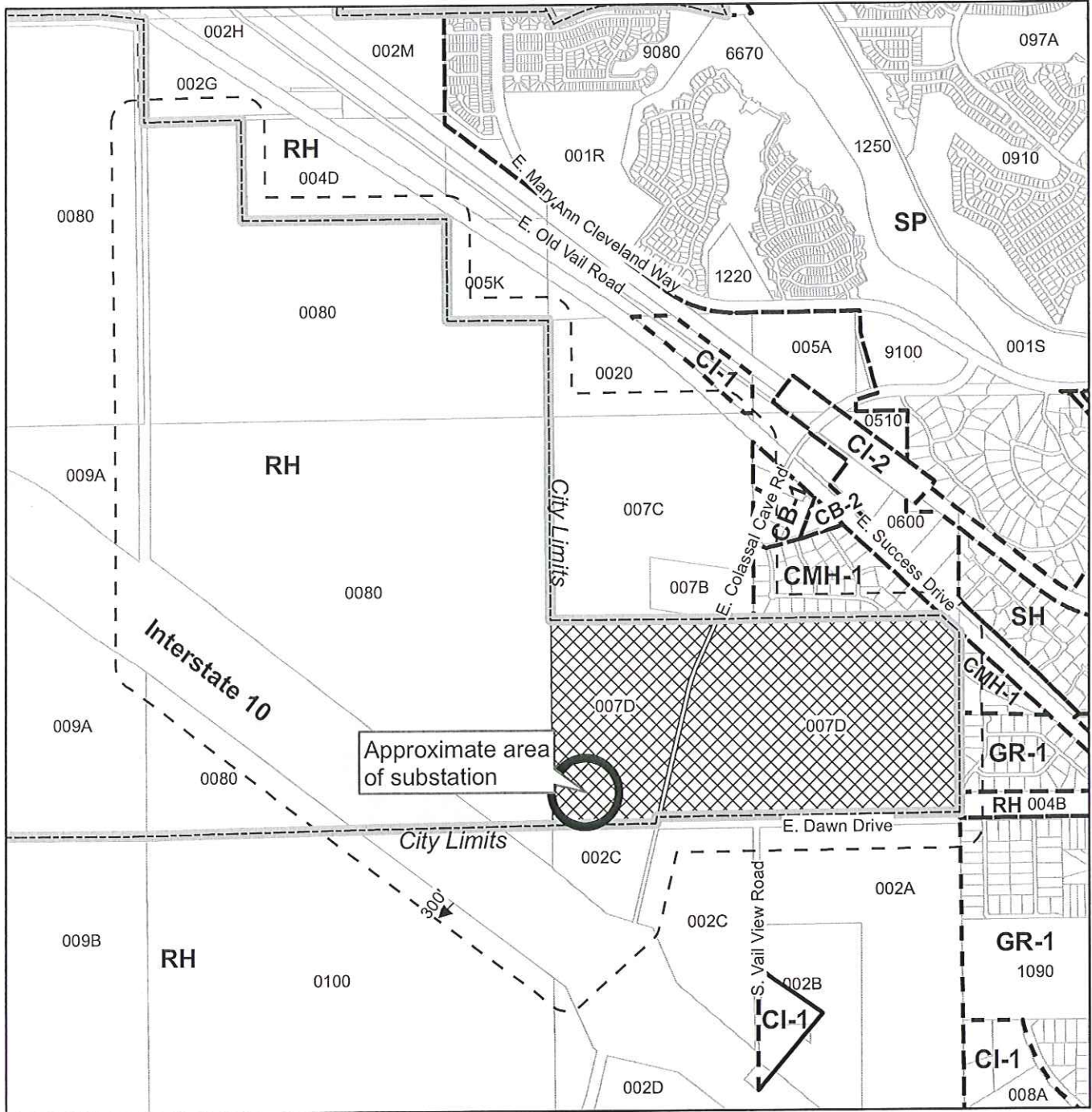
12. Should buffelgrass be present on the site, a buffelgrass mitigation management plan shall be created for the site as a component of the Native Plant Preservation Plan portion of the Landscape Plan.
13. A final mitigation plan shall be provided for any area disturbed outside the perimeter wall during construction, subject to Development Services and the Office of Conservation and Sustainability Development staff approval.
14. Preparation of a complete Drainage Report, including details of detention/retention, is required. Should detention/retention be required, the following will apply:
  - a. Each detention/retention basin shall include a sediment trap, or other sediment control measures as approved by the City Engineer, to prevent sedimentation of the detention/retention basin. Each sediment trap, or other sediment control measure, shall have a provision for total drainage.
  - b. Detention/retention basin floors shall be graded to drain either toward the outlet structure or other logical point. Basin floors shall not be flat.

ROAD IMPROVEMENTS/VEHICULAR ACCESS/CIRCULATION

15. A security gate shall be provided at the access road at or near the intersection of Dawn Drive and Colossal Cave Road and two security gates will be provided on both access drives leading to the substation.







### Special Exception - Full Notice Procedure



0 1,000 2,000 Feet

1 inch = 2,000 feet

-  Area of Special Exception Request  
**RH** Zoning of Requested Area  
 Notification Area (300 foot radius)  
 Zone Boundaries  
 City Limits

Neighborhood, Area Plan(s): Rincon/Southeast Subregional Plan

Address: North of Dawn Road, both sides of Colossal Cave Rd.

Base Maps: Sec.16 T.16 R.16

Ward: 4

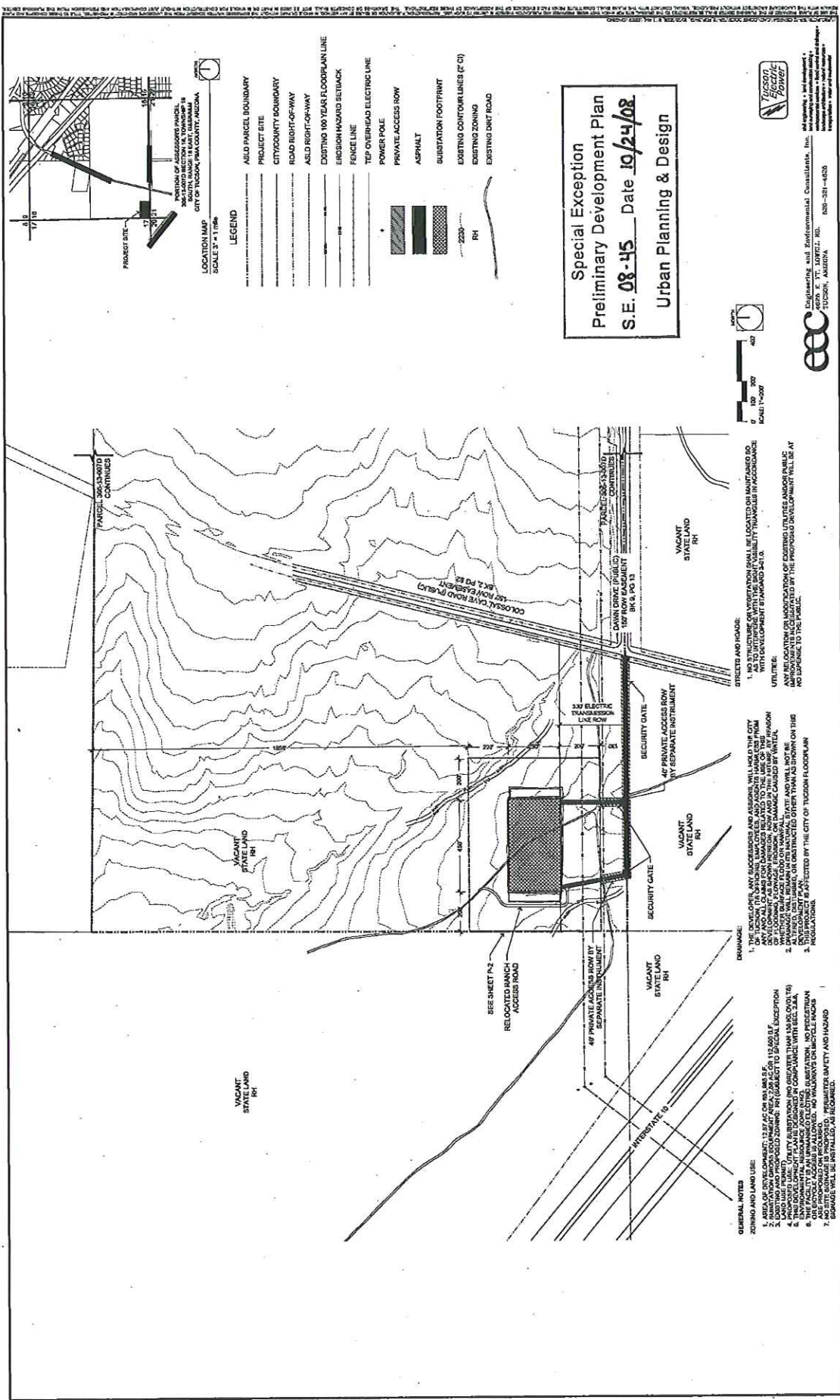






**SE-08-45 Cienega Substation - Colossal Cave Road**  
November 2008 Aerial





Special Exception  
Preliminary Development Plan  
S.E. 08-15 Date 10/24/08  
Urban Planning & Design



Engineering and Environmental Consultants, Inc.  
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TUCSON, ARIZONA 85712  
520-351-4000

 THE PLANNING CENTER A DIVISION OF THE CROWN, INC. THIS DOCUMENT IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF THE PLANNING CENTER.	PROJECT TITLE: DATE: 10/24/08 DRAWN BY: LUL CHECKED BY: [ ]	CALL TWO WORKS DATE: 10/24/08 1-800-255-1100 HARRIS, ARIZONA MARICOPA COUNTY	REVISIONS/SUBMITTALS DATE	PRELIMINARY DEVELOPMENT PLAN CIENEGA SUBSTATION FOR AGENCY REVIEW AND APPROVAL ONLY. NOT FOR CONSTRUCTION. NOT FOR BIDDING.	CASE NO.: TEP-12 CIENEGA SUBSTATION PORTION OF ASSESSORS PARCEL 1963-5000 SECTION 17, T1S, R1E, S4E CITY OF TUCSON, PIMA COUNTY, ARIZONA REFERENCE: P-1 1 OF 2
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